



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: AE3007A1 BYPASS RATIO: 4.8
 UNIQUE ID NUMBER: 01P06AL028 PRESSURE RATIO (π_{co}): 18.0
 COMBUSTOR: Type 3 (reduced emissions)
 ENGINE TYPE: MTF RATED THRUST (F_{oo}) (kN): 34.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F _{oo} (g/kN) or SN	12.3	108.5	44.6	0.0
AS % OF ORIGINAL LIMIT	63.0	91.9	58.8	0.0
AS % OF CAEP/2 LIMIT (NO _x)			73.4	
AS % OF CAEP/4 LIMIT (NO _x)			75.5	
AS % OF CAEP/6 LIMIT (NO _x)			76.6	
AS % OF CAEP/8 LIMIT (NO _x)			81.9	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F _{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.383	0.03	0.75	16.17	0.0
CLIMB OUT	85	2.2	0.318	0.03	0.56	14.07	0.0
APPROACH	30	4.0	0.113	0.03	6.72	7.13	0.0
IDLE	7	26.0	0.046	3.85	39.91	4.17	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			157	279	3088	1344	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F _{oo} (g/kN) or AVERAGE SN (MAX)				8.0	88.4	38.5	0.0
SIGMA (D _p /F _{oo} in g/kN, or SN)							
RANGE (D _p /F _{oo} in g/kN, or SN)							

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.9-99
TEMPERATURE (K)	291-301
ABS HUMIDITY (kg/kg)	0.009-0.012

FUEL

SPEC	Jet A
H/C	1.9
AROM (%)	16-20

MANUFACTURER: Rolls-Royce Corporation
 TEST ORGANIZATION: Rolls-Royce Corporation
 TEST LOCATION: Indianapolis, Indiana
 TEST DATES: 09/06/2001-11/06/2001

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

- For effectivity see Rolls-Royce Notice to Operators No. AE3007A-076
- Data in this form for AE3007A1 engine fitted with reduced emissions combustor and PAB fuel nozzles
- Results based on Rolls-Royce report EDR 19587

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)